Journal of Research on the Lepidoptera 14(2):98-99, 1975

1160 W. Orange Grove Ave., Arcadia, California 91006, U.S.A.
© Copyright 1975

EARLY WORK ON THE MEGATHYMIDAE

JOHN ADAMS COMSTOCK

My interest in Lepidoptera began in 1894, at 11 years of age, when living in Evanston, Illinois. This was appreciably stimulated by correspondence with a young collector living in Pasadena, California, named Fordyce Grinnell, whose address I found in the Entomological News. This contact cherished my hope that I would someday collect butterflies in California.

At that time I knew nothing of the 'giant skippers' called *Megathymidae,* since they did not occur in Illinois.

It was not until about 1920 that interest in the Yucca and Agave borers was aroused by a chance acquaintance with Commander Charles M. Dammers of Riverside.

Dammers brought his son Carlito to the Southwest Museum, where I was then Director, and asked my assistance in teaching the boy how to rear and illustrate the life histories of butterflies. This led to the father's interest in excess of the boy's capabilities, and resulted in Dammers cooperating with us in joint publication of numerous articles on the biology of California lepidoptera.

In 1932 we were able to successfully rear *Agathymus stephensi* (Skinner) on *Agave deserti Engelman,* and to publish its life history in Volume 33, (2): pages 81-86, 1934, Bulletin, So. Calif. Academy of Sciences.

This led us to an intensive effort to locate larvae of a *Megathymus,* the imagos of which had been netted occasionally in association with Joshua trees — *Yucca brevifolia* Engelman, on the Mojave Desert. Commander Dammers and Carlito began a search on the Joshuas one forenoon, but Carlito soon tired, and stretched full length on the desert floor while Dammers climbed assiduously. Suddenly Carlito noticed a female *Megathymus* alighting on a baby Yucca plant of about 8 inches in height, which proceeded to lay an egg. A shout brought the Commander to earth. Sure enough, an egg, and by further searching, more on other young shoots. The problem was solved. The *Megathymus* larvae were root-feeders underground, never on or in the leaves.

It then became easy to locate the 'cones' on top of infested young plants, and dig down to the roots where the larvae were feeding in late winter, or the pupae resting below the cones in early spring.

The life history was published and illustrated in the same issue of the Bulletin as was that of *stephensi*. It was listed as *Megathymus yuccae navajo,* the name that had been given to me by Dr. Henry Skinner on a specimen sent to him for determination. Later (1956) the subspecies was named by Stallings and Turner, in the Academy "Bulletin" as *martini,* in recognition of Lloyd's fine work on the *Lepidoptera.*

Those of you who have worked on the *Megathymidae* recall that our San Diego Museum Curator of Insects, Charles F. Harbison, has described two species of *Agathymus* from Baja California, namely *comstocki* and *dawsoni,* and that I have described and illustrated the early stages of these. In addition, I have similarly treated *Megathymus evansi.* The main reason that I mention it is that, by comparison with the great amount of research made by such experts as Don B. Stallings, J. R. Turner, H. Avery Freeman, Dr. C. J. Remington and Dr. Ernest R. Tinkham, I fully realize the shortcomings of my own efforts.

With a complex group such as this, studies require methods of oviposition, careful association of larvae with specific food plants, exact location in the leaves or roots of the plants, sap or plant fiber feeding, setu and method of frass disposal, nature and placement of the frass, method of silk-lining of the tunnels, chromosome counts, and many other details.

This means that one must live in close contact with a given species if they hope to obtain an intimate picture of life activities. This is an exacting task.